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25X1 3. 5. Insecticides are produced, particularly a powder for use against lice; it was called "Sarnex". 6. 7. 8. Dr. Gehricke and Dr Zorn developed oils for aircraft engines. These oils were esters of higher alcohols with adipic acid. They were produced during the war and showed very little change with use, and had a low viscosity number, about 140. 9. at Leuna. Perlon was not being produced Research and Organic Laboratories were working on the development of Perlon thread, but they had not mastered the process by September 1950. Dr. Koethnig of the Research Laboratory had worked out a new method for caprolactam which he kept a very close secret. Dr Fritsche and Dr Deiters, both capable scientists, were also working in the caprolactam field. As for the production of caprolactam, phenol is hydrogenated over 25X1 a catalyst at 120°C and 150 atmospheres to form cyclohexanol. This is then oxidized by a method unknown to me to produce cyclohexanone, which is treated with hydroxylamine sulfate to give the oxime. This is then treated with sulfuric acid and rearranged to give caproloctam. 25X1 production of caprolactam was about 40 tons per month, and almost all of this was taken by the Soviets.

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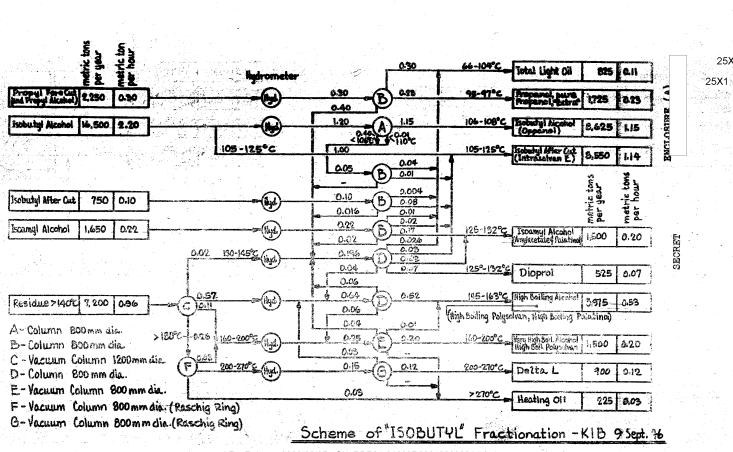
There was very little research going on in the Organic Department at Leuna in the years 1945-50. The project that the Soviets were most interested in was the development of caprolactam, and on that project was expended the greatest amount of energy. The Soviets also showed interest in the development of urea production, because they needed the urea to make glue for laminated wood production. They also needed urea for the spongy resin, Iporka, used for insulating rail—way cars, especially refrigerator cars. 2-A cil made at Leuna is a mixture of \$8906 cil and spindle cil. The \$8906 cil is made by Dr Munzing in the Organic Laboratory. It is obtained by the polymerization of ethylene under pressure with aluminum chloride and then perhaps condensing with higher alcohols. The 2-A cil is a turbine cil for local Soviet Zone consumption and was not Soviet-inspired. It was developed because all available turbine cils were of inferior quality. At 50°C, it had a viscosity of 6-7 in an Engler viscosimeter.

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ENCLOSURE (A) Plan for Isobutyl Fractionation (Flow Sheet)

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